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| 10/733,503 | 12/11/2003 | Scott A. Flatness | 085.10960-US(03-430) | 9228 |
| 34704 7590 02/22/2008 BACHMAN & LAPOINTE, P.C. 900 CHAPEL STREET SUITE 1201 NEW HAVEN, CT 06510 | | | EXAMINER COCKS, JOSIAH C | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/733,503

Applicant(s)

FLATNESS ET AL.

Examiner

Josiah Cocks

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-10 and 14-24 is/are pending in the application.
- 4a) Of the above claim(s) 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-10 and 14-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/13/2007.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Receipt of applicant's amendment filed November 8, 2007 is acknowledged. The prior indication allowable subject matter of claim 8 is withdrawn in view of the newly discovered reference(s) to Philips and Cooke and in light of the teachings of the prior art of record taken as a whole. Rejections based on the newly cited reference(s) follow. This Office action is made non-final.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 1-4, 6-8, and 14-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over **U.S. Patent No. 5,494,004 to Hunter, Jr. ("Hunter")** (previously cited) in view of **U.S. Patent No. 1,599,283 to Phillips ("Phillips")** and **U.S. Patent No. 1,380,358 to Cooke ("Cooke")**.

Hunter discloses in the specification and figures 1-15 an invention in the same field of endeavor as applicant's invention and similar to that described in applicant's claims 1-4, 6-8, and 14-24.

In particular, in regard to at least claim 1 and 14, Hunter shows an apparatus for cleaning a surface within a vessel (interior surface of vessel wall 83), the apparatus comprising: an elongate combustion conduit (21 and 51) extending from an upstream end to a downstream end with an aperture (81) in a wall of a vessel (83) and positioned to direct a shock wave toward the surface (see abstract and note pulsed pressure waves and col. 6, lines 38-54); and a plurality of moveable supports (each of supports 153R, 151R, 155 and 153F, 151F, 155) supporting weight of the combustion conduit (at least portion 51) at a plurality of location along a length of

the combustion conduit (note multiple locations in Fig. 1). This apparatus in Hunter is considered to form the recited "industrial facility" of claim 14.

In regard to at least claim 6, the supports are considered to accommodate longitudinal expansion and/or contraction of the combustion conduit as recited.

In regard to at least claims 7 and 22, each of the supports, that include legs (151R, 151F), axles (153R, 153F), and wheels (155), are broadly considered to each constitute a "trolley" as recited meeting applicant's recitation. The wheels (155) engage a track (157) on a support surface (top of 161).

Alternatively, in regard to at least claims 7 and 8, even if the multiple legs, axles, and wheels of Hunter are not properly considered to form a plurality of trolleys, these structure clearly form at least one platform (131) which is clearly understood to form a trolley. Further, as the sections (51 and 21) are reasonably considered to form the recited combustion conduit, this trolley (131). The recitation that the combustion conduit comprises a plurality of separable segments that are each supported on one of a plurality of trolleys is considered met by simply duplicating the detonative cleaning assembly, show for instance in Fig. 1 of Hunter where each assembly is at least arranged adjacent another, for instance side-by-side. In doing so, the collection assemblies would form the apparatus for cleaning a surface within a vessel including an elongate combustion conduit as formed by the collective combustion conduits of the assemblies. It has been held that mere duplication of parts has not patentable significance unless a new and unexpected result is produced. See MPEP 2144.04(VI)(B). Accordingly, in this case, merely duplicating the cleaning assembly of Hunter would be expected to provide for additional means for cleaning the interior of walls of the vessel (83).

Hunter does not disclose a resilient member resiliently restraining the combustion conduit against recoil forces (claims 1 and 14) nor the particular arrangement and structure of the resilient member (claims 2-4, 15-17, 21, 23, and 24). Hunter also does not disclose that the vessel being cleaned is a boiler or includes surfaces formed by a boiler tube bundle.

The combined teachings of Phillips and Cooke are cited to remedy the deficiencies in Hunter. Phillips discloses a cleaning device of a condenser (A) with outer head (D). This condenser is reasonably considered to form a boiler and includes a plurality of tubes (C) that form the recited boiler tube bundle. In Phillips the cleaning device is formed as a base portion (see head 26 and Fig. 3) with an elongated tube (25) and nozzle (2) that is inserted into the condenser and cleans the tubes (C) by means of "water, steam, air or other fluid." (see page 1, lines 10-12). Phillips further provides that the head (26) includes "connecting chains or other flexible links 30" (see page 1, lines 85-87) that are connected both to the head (26) and to the cap (11) which forms part of the wall of the vessel (D). The purpose of these links (30) is to maintain the head (26) in position during operation of the cleaning device (see page 1, lines 87-93). The examiner considers that a person of ordinary skill in the art would reasonably regard the function of the links (30) to, among other things, maintain the cleaning device in proper position due to potential recoil forces associated with the ejection of the "water, steam, air or other" fluid from the nozzle (2) of the tube (25). While Phillips does describe item (30) as "flexible links", Phillips does not expressly disclose this links to be resilient or specifically tension springs or tension springs with an additional strap in series.

Turning now to Cooke, this reference shows a gun that deploys a projectile by using the forces associated with a combustion explosion. Like in Phillips, Cooke employs links (27) that

function to maintain the gun assembly in proper position during its operation (see page 2, lines 55-61). Cooke further specifies that such links are understood to be formed by tension springs to accomplish this purpose (id.). In light of this teaching in Cooke, the examiner considers a person of ordinary skill in the art would reasonably select tension springs for the "flexible links" of Phillips. Regarding the recitation of straps in series with the tension springs, the examiner considers that selecting a tension spring for the flexible link (30) of Cooke would result in the use of tension springs attached in series to the hooks (4) in Phillips. At least these hooks (4) are reasonably considered the recited straps.

Therefore, in regard to claims 1-4, 6-8, and 14-24, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the cleaning apparatus of Hunter to incorporate the resilient restraining mechanism as suggested by Phillips and Cooke, for the desirable purpose of maintaining the cleaning device in proper position during its operation (see each of Phillips, page 1, lines 87-93 and Cooke, page 2, lines 55-61).

6. **Claim 9** is rejected under 35 U.S.C. 103(a) as being unpatentable over **Hunter, Phillips, and Cooke** as applied to claim 1 above and further in view of **U.S. Patent No. 4,218,016 to Freund** ("Freund").

Hunter, Phillips, and Cooke teach substantially all the limitations of claim 9 with the exception of the recitation that the plurality of supports comprise a plurality of hangers.

Freund teaches a retractable cleaning device for the surfaces of boiler tubes (see abstract) that is considered analogous to applicant's invention and the cited prior art. In Freund, the cleaning device is formed by a moveable support (12) that, in lieu of a trolley assembly, is

supported by multiple hanging roller assemblies (30 and 20). This hanging assemblies function to insert and retract lance tube (12) from the boiler (see at least col. 2, lines 25-44).

Therefore, in regard to claim 9, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to substitute the hanging roller assemblies taught in Freund for the trolley arrangement of Hunter as matter of simply substituting one movement mechanism for another for obtain the predictable result of advancing and retracing a cleaning device from a vessel.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. **Claims 1-4, 6-8, and 21-24** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 7 of copending **Application No. 10/733,556**.

Although the conflicting claims are not identical, they are not patentably distinct from each other because despite some difference in claim terminology the claims 1-4, 6-8, and 21-24 of this application are claiming the same invention as claim 7 of Application No. 10/733,556. The recitation of specific resilient means such as a tension spring and a tension spring with a strap are considered obvious in view of the recited resilient means of claim 7 of Application No. 10/733,556.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

9. **Claims 1-4, 6, 9, and 21-24** are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1 and 14 of copending **Application No. 10/733,544** in view of **U.S. Patent No. 1,599,283 to Phillips** ("Phillips") and **U.S. Patent No. 1,380,358 to Cooke** ("Cooke").

Claims 1-4, 6, 9, and 21-24 are claiming the same invention as claims 1 and 14 of copending Application No. 10/733,544 with the exception of the recitation of a resilient means and its structure and arrangement.

However, the combined teachings of Phillips and Cooke are cited to remedy the deficiency. Phillips discloses a cleaning device of a condenser (A) with outer head (D). This condenser is reasonably considered to form a boiler and includes a plurality of tubes (C) that form the recited boiler tube bundle. In Phillips the cleaning devices is formed as a base portion (see head 26 and Fig. 3) with an elongated tube (25) and nozzle (2) that is inserted into the condenser and cleans the tubes (C) by means of "water, steam, air or other fluid." (see page 1, lines 10-12). Phillips further provides that the head (26) includes "connecting chains or other flexible links 30" (see page 1, lines 85-87) that are connected both to the head (26) and to the cap (11) which forms part of the wall of the vessel (D). The purpose of these links (30) is to maintain the head (26) in position during operation of the cleaning device (see page 1, lines 87-93). The examiner considers that a person of ordinary skill in the art would reasonably regard the function of the links (30) to, among other things, maintain the cleaning device in proper position due to potential recoil forces associated with the ejection of the "water, steam, air or other" fluid from the nozzle (2) of the tube (25). While Phillips does describe item (30) as

"flexible links", Phillips does not expressly disclose this links to be resilient or specifically tension springs or tension springs with an additional strap in series.

Turning now to Cooke, this reference shows a gun that deploys a projectile by using the forces associated with a combustion explosion. Like in Phillips, Cooke employs links (27) that function to maintain the gun assembly in proper position during its operation (see page 2, lines 55-61). Cooke further specifies that such links are understood to be formed by tension springs to accomplish this purpose (id.). In light of this teaching in Cooke, the examiner considers a person of ordinary skill in the art would reasonably select tension springs for the "flexible links" of Phillips. Regarding the recitation of straps in series with the tension springs, the examiner considers that selecting a tension spring for the flexible link (30) of Cooke would result in the use of tension springs attached in series to the hooks (4) in Phillips. At least these hooks (4) are reasonably considered the recited straps.

Therefore, in regard to claims 1-4, 6, and 9, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the cleaning apparatus of claims 1 and 14 of copending Application No. 10/733,544 to incorporate the resilient restraining mechanism as suggested by Phillips and Cooke, for the desirable purpose of maintaining the cleaning device in proper position during its operation (see each of Phillips, page 1, lines 87-93 and Cooke, page 2, lines 55-61).

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

10. This action is made non-final. A THREE (3) MONTH shortened statutory period for reply has been set. Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. U.S. Patent Nos. 1,010,028 (Davies), 2,972,502 (Jennings et al.) and 3,068,507 (Evans) are cited to further show boiler heating devices.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Josiah Cocks whose telephone number is (571) 272-4874. The examiner can normally be reached on M-F 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven McAllister, can be reached (571) 272-6785. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

Application/Control Number:
10/733,503
Art Unit: 3749

Page 12

like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jcc
January 15, 2008


JOSIAH COCKS
PRIMARY EXAMINER
ART UNIT 3749